EFFECT OF ADDING DEXMEDETOMIDINE vs FENTANYL TO INTRATHECAL BUPIVACAINE ON SPINAL BLOCK CHARACTERISTICS IN GYNECOLOGICAL PROCEDURES: DOUBLE BLINDED CONTROL STUDY

Abstract:

The purpose of this study was to evaluate the onset and duration of sensory and motor block as well as postoperative analgesia and adverse effects of Dexmedetomidine or Fentanyl given intrathecally with hyperbaric 0.5% Bupivacine for spinal anesthesia in patients undergoing total abdominal hysterectomy.

Approach:

60 patients classified as ASA (American society of Anesthesiologist) status I and II scheduled for total abdominal hysterectomy were prospectively studied. Patients were randomly allocated to receive intrathecally either 15mg Hyperbaric 0.5% Bupivacaine plus 5 micro gram Dexmedetomidine (Group D n = 30) or either 15mg Hyperbaric 0.5% Bupivacaine plus 25 microgram Fentanyl (Group F n = 30), the onset time to reach desired sensory and motor level , the regression time of sensory and motor block, haemodynamic changes and side effects were recorded.

Results:

Patients in Group D had significant longer sensory and motor block than patients in Group F. The mean time of sensory regression to S1 was 459.03 +/- 56.93 mins in group D, 358.97 +/- 46.73 mins in group F. The regression time of motor block to reach modified bromage scale 0 was 288.63 +/- 31.12 mins in group D and 212.67 +/- 38.97 mins in group F.

1. The addition of Dexmedetomidine significantly prolonged the duration of sensory and motor block.
2. The addition of Dexmedetomidine significantly prolonged the time for first demand analgesia.
3. The addition of Dexmedetomidine intrathecally prolonged onset of sensory or motor block when compared with Fentanyl.
4. The incidence of side effects was limited to the occurrence of hypotension, bradycardia in the groups that received Dexmedetomidine intrathecally.

Conclusion:

In cases undergoing total abdominal hysterectomy under spinal anesthesia, 15 mg of Hyperbaric 0.5% Bupivacaine supplemented with 5 microgram of Dexmedetomidine produces prolonged sensory and motor block as well as prolonged postoperative analgesia when compared with 25 microgram of Fentanyl.

Keywords:

1. Dexmedetomidine
2. Bupivacaine
3. Fentanyl
4. Spinal anesthesia.